SEPTEMBER 1967

Cooperative State-Federal

PSOROPTIC SHEEP AND CATTLE SCABIES ERADICATION

PROGRESS REPORT FISCAL YEAR 1967

AGRICULTURAL RESEARCH SERVICE U.S. DEPARTMENT OF AGRICULTURE

PSOROPTIC SHEEP SCABIES

PROGRAM ACTIVITIES FISCAL YEARS 1954 THROUGH 1967

Fiscal Year	Infected			Other Than Public Stockyards		At Public Stockyards		
	States	Counties	Flocks 1/	Inspections	Dippings	Infected Lots	Inspections 2/	Dippings
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
1954	21	183	391	5,477,334	390,530	68	13,179,281	241,689
1955	24	219	442	5,587,267	391,952	72	13,447,297	242,627
1956	25	267	607	8,730,299	441,713	110	12,835,044	235,488
1957	24	289	682	11,994,987	573,810	150	12,791,764	299,474
1958	24	300	726	9,500,782	356,854	206	11,626,207	341,924
1959	24	276	736	10,848,946	309,609	209	11,908,863	388,450
1960	25	280	886	10,836,576	390,958	214	12,351;029	374,834
1961	24	296	872	12,031,249	506,745	187	12,304,306	350,339
1962	24	316	767	12,771,677	591,231	121	11,722,578	303,196
1963	21	180	268	15,530,561	843,447	51	9,769,549	299,291
1964	15	88	126	15,528,685	343,145	10	8,509,121	155,126
1965	18	91	168	21,085,187	367,231	6	7,123,955	156,762
1966	9	34	49	20,010,807	405,629	4	6,543,109	132,963
1967	2	2	2	13,745,349	107,117	2	5,532,225	74,964

1/ Includes infected lots located at public stockyards.
2/ Includes inspections of goats.

Prepared by

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General

Program activities during the fiscal year were centered in Iowa where 32 infected flocks had been found during Fiscal Year 1966 and 119 in Fiscal Year 1965. During Fiscal Year 1967, two "down-the-road" inspections of all sheep in Iowa failed to disclose any scabies infection. Sheep scabies has not been reported in Iowa since May 9, 1966. Effective June 7, 1967, Part 74, Title 9, Code of Federal Regulations was amended to remove Iowa from the list of States in the Sheep Scabies Infected-Eradication Area. Major efforts in all other States involved vigorous "down-the-road" surveillance inspections and/or monitoring inspections at concentration points; i.e., premises of dealers, traders; feedlots; local fairs; shows; special sales; sales barns; public stockyards; and Federal, State, county, and municipal slaughtering establishments. All inspection efforts were aimed at uncovering any foci of the disease which might have eluded previous efforts to find "that last infected flock."

Two outbreaks of psoroptic sheep scabies were disclosed during Fiscal Year 1967 as compared to 49 outbreaks in Fiscal Year 1966 and 168 outbreaks in Fiscal Year 1965. Both outbreaks during Fiscal Year 1967 were diagnosed at public stockyards on sheep that originated in Sheep Scabies Free Areas; one in Lake County, Illinois, and the other in Fillmore County, Minnesota. Effective December 22, 1966, Part 74, Title 9, Code of Federal Regulations was amended placing Lake and DeKalb Counties, Illinois, in the Infected-Eradication Area. Four infected lots were found at public stockyards during Fiscal Year 1966 and six during the previous year. Also, in Fiscal Year 1967, 13,745,349 sheep were inspected on farms and 107,117 were dipped as compared to Fiscal Year 1966 when 20,010,807 sheep were inspected on farms and 405,629 were dipped.

Scabies Training Courses Held

One scabies training course was held at Beltsville, Maryland, and one at Fresno, California. Seventy-six State or Federal inspectors from 15 States were trained during these two courses. This brought the number of persons so trained to 4,673 at 153 courses held in 20 different States.

Active Laboratory Support

The ANH Division Chemical Reference Laboratory, Technical Services, Beltsville, Maryland, actively supported field activities. During Fiscal Year 1967, quantitative analysis tests were conducted on the following number of dipping bath samples: Toxaphene - 5,450; Dursban - 732; Lindane - 151; Malathion - 135; Ciodrin - 126; Sevin - 119; Methoxychlor - 10; Delnav - 29; Arsenic - 56; and Lime-sulphur - 38. In addition, emulsion stability tests were conducted on 16 product samples; and four wettable powder products were processed for particle size and other studies to determine if ANH Division specifications were being met.

Considerable experimental work was done on general methods of analysis of chlorinated hydrocarbon, chlorinated organophosphate, and organophosphate acaricides including the application of automatic analysis.

A vatside test for toxaphene emulsion dips and other chlorinated hydrocarbons has been revised and plans have been made to conduct field evaluation test

trials at a number of locations during Fiscal Year 1968.

Work on a method to safely dispose of organic pesticides from animal dipping operations was concluded. While effective, the disposal method was not deemed practical for everyday use due to inherent cost factors involved. Preliminary experiments and feasibility studies for the disposal of arsenical dip bath solutions have been initiated.

Arsenical kits for 9,000 vatside tests and lime-sulphur kits for 133 tests were standardized, packaged, and sent to the field. In addition, a survey of field performance of the arsenic vatside test was made. This entailed production of As_2O_3 samples for 1,070 vatside tests.

Field Tests of Acaricides

As part of the continuing surveillance of permitted dips and of other products which may have a place in the eradication of external parasites, the following field trials were conducted at Beltsville:

1. Pesticidal Properties, Toxicity, and Stability Test of Dursban Emulsion Concentrates.

   Previously conducted work indicated that one treatment with concentrations as high as 0.10 percent was not effective in eliminating scabies from a flock of sheep. Additional work conducted during late 1966 and early 1967 regarding effectiveness of Dursban against *Psoroptes ovis* has been inconclusive as some field trials have shown promise at concentrations of 0.12 percent and others have failed at concentrations of 0.20 percent.

   Dursban has two properties which are highly important. It is very safe and is quite stable in the dipping vat. Sheep have been dipped in concentrations in excess of two percent with no signs of toxicity.. Chemical analyses have been conducted on dip vat samples for periods up to 23 weeks with no appreciable breakdown of Dursban.

2. Disproportionate Carryout and Pesticidal Properties of Malathion Emulsion Concentrates.

   Additional field trials verified earlier findings that concentrations of Malathion as low as 0.25 percent were effective in eliminating scabies from a small flock of sheep. Malathion has low mammalian toxicity and can be used safely on a large variety of mammals including members of the cat family.

   The particular emulsion concentrates tested were not satisfactory for dipping vat use as the disproportionate carryout was excessive. In some cases, over 50 percent of the Malathion was removed from the vat after dipping only 12 sheep. It should be emphasized that the quality of the emulsion of different proprietary brands may vary greatly.

   Present work indicates a 0.50 percent or 0.55 percent concentration of Malathion would be best for the initial charge and replenishments added to the vat should exceed the initial charge by at least 25 percent. Stability

studies indicate Malathion breakdown in the dipping vat may be quite high after about eight weeks.

It should be noted that Malathion is *NOT* a permitted dip and additional work must be conducted before it could be considered as such.

3. Pesticidal Properties and Stability of Ciodrin Emulsion Concentrates.

Limited research has indicated that Ciodrin is effective against chorioptic mites on cattle. It has the advantage of being usable on slaughter cattle and on lactating dairy animals. Present work regarding the effectiveness of Ciodrin against *Psoroptes ovis* has been inconclusive as some field trials have shown promise at extremely low concentration and others have failed at relatively high concentrations.

Field tests are currently underway to evaluate the effectiveness of several concentrations of Ciodrin against *Chorioptes bovis* on cattle. The cattle are treated in a "spray-dip" machine. No conclusive results are yet available, but the work looks promising.

Disadvantages of using Ciodrin include high cost and the fact that Ciodrin is hydroscopic and deteriorates very rapidly in water.

Sarcoptic Mites Collected from Several Species of Animals in Various States

CATTLE: Sarcoptic mites were collected from 15 lots of cattle: Conn. (1), Iowa (2), and Vt. (12).

SWINE: Sarcoptic mites were collected from 100 lots of swine: Colo (84), Conn. (1), Hawaii (1), Idaho (2), Ky. (1), Miss. (1), Nebr. (2), N. Mex. (1), Texas (2), Vt. (1), and Wash. State (4).

SHEEP: Sarcoptic mites were collected from one lot of sheep in Nebraska.

HORSES: Sarcoptic mites were collected from two lots of horses in Mississippi.

Chorioptic Mites Collected from Several Species of Animals in Various States

CATTLE: Chorioptic mites were collected from 287 lots of cattle involving the States of Ala. (1), Ariz. (28), Ark. (3), Calif. (66), Colo. (16), Ga. (3), Ill. (24), Ind. (4), Iowa (14), Kans. (8), Ky. (4), Md. (1), Mich. (2), Minn. (1), Miss. (16), Mo. (7), Mont. (2), Nebr. (1), N. Y. (1), Ohio (1), Okla. (2), Tenn. (42), Texas (23), Utah (1), Vt. (5), Wash. State (8), Wis. (2), and Wyo. (1).

SHEEP: Chorioptic mites were collected from four lots of sheep: Calif. (1), Iowa (2), and N. Y. (1).

HORSES: Chorioptic mites were collected from two lots of horses in Mississippi.

Multiple Collections of Mites within the Same Herd

Both chorioptic and sarcoptic mites were collected from two herds of cattle in Vermont. One herd was located in Addison County and the other in Orleans County.

Psoroptic Mites Collected from Several Species of Animals in Various States

SHEEP: Psoroptic mites were collected from sheep in a Lake County, Illinois, flock and from sheep in a Fillmore County, Minnesota, flock.

HORSES: Psoroptic mites were collected from a horse on a Sussex County, Delaware, farm and from a horse on a St. Tammany Parish, Louisiana, farm.

GOATS: Psoroptic mites were collected from 51 lots of goats: Colo. (2), Ind. (1), Mass. (1), and Texas (47).

RABBIT: Psoroptic mites were collected from one rabbit in Texas.

ELK: Psoroptic mites were collected from one elk in a Bismarck, North Dakota, zoo (elk originally from Yellowstone National Park).

CAPE BUFFALO: Psoroptic mites were collected from two Cape Buffalo exhibiting lesions and signs of scabies at the Los Angeles Zoo, Los Angeles, California. The two infected Cape Buffalo plus a third Cape Buffalo and a Sable Antelope had recently arrived at the Los Angeles Zoo from the Athenia Quarantine Station, Clifton, New Jersey.

Psorergates Mites Collected from Cattle

During March 1967 *Psorergates bos* mites were identified from skin scrapings collected from one bull in a herd of 11 cattle maintained on a Luna County, New Mexico, farm.

In Fiscal Year 1966, *Psorergates bos* mites were identified from skin scrapings taken from Texas cattle and skin scrapings taken from New Mexico cattle at a Clovis, New Mexico, public stockyards. During March, at the same stockyards, *Psorergates bos* mites were collected from a second lot of Texas cattle.

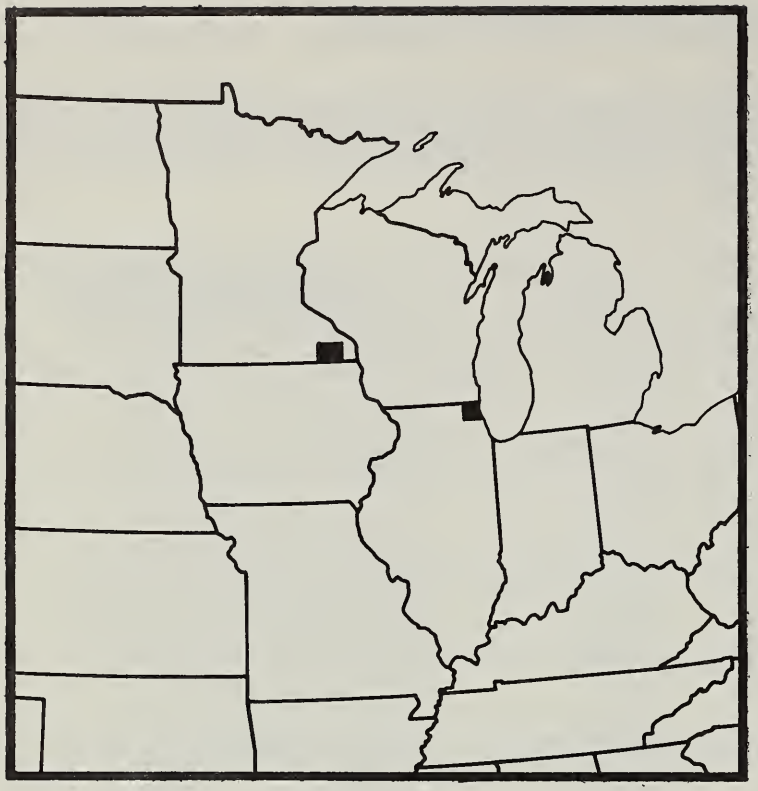
This new mite species was first collected from cattle in January 1963 in Quay County, New Mexico. During Fiscal Year 1964, the parasite was found in three New Mexico herds in Quay and Guadalupe Counties and in two Texas herds in Bailey and Parmer Counties. During Fiscal Year 1965 these mites were collected at a Texas auction market from a Jones County bull and from a Roosevelt, New Mexico, County herd at a Clovis public stockyards.

Psorertates ovis mites have been collected from a New Mexico sheep flock in 1963, a California flock in 1961, and an Ohio flock in 1952.

NONPARASITIC MITES AND OTHER MISCELLANEOUS COLLECTIONS

Nonparasitic mites are frequently found on cattle, sheep, and other animals being inspected for scabies. These mites do not cause scabies but can easily be confused with those which cause the disease, particulary if it is suspected that the flock or herd may be infected. The following nonparasitic mites and other miscellaneous parasites were reported during Fiscal Year 1967.

State	County	Date	Host	Nonparasitic Mites or Miscellaneous Parasites
Arizona	Cochise	7-25-66	Fly	Pyemotidae mite
Connecticut	Fairfield	6- 9-67	Dog	Curculionidae - weevil
Delaware	Kent	6-14-67	Horse	Acaridae - grain mite
Indiana	Noble	8-12-66	Cattle	Acaridae - grain mite
Iowa	Butler	1-10-67	Sheep	Oribatei - soil mite
	Plymouth	2-16-67	Sheep	Tarsonemidae - plant mite
	Sioux	4-13-67	Sheep	Tarsonemidae - plant mite
	Howard	4-24-67	Cattle	Acaridae - grain mite
Kentucky	Trigg	1- 6-67	Sheep	Acaridae - grain mite
	Christian	1-13-67	Sheep	Oribatei - soil mite
Maryland	Howard	11- 8-66	Rabbit	*Trombicula sp.* - chigger
Minnesota	Dakota	9-15-66	Sheep	Microsejidae - plant mite
Mississippi	Hinds	10-21-66	Dog	Acaridae - grain mite
	Bolivar	12- 7-66	Rabbit	*Trombicula sp.* - chigger
	Bolivar	12- 7-66	Rabbit	Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	*Irombicula sp.* - chigger Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	Laelaptidae - rodent mite
	Bolivar	12- 8-66	Squirrel	Laelaptidae - rodent mite
Missouri	Randolph	7-20-66	Cattle	Tarsonemidae - plant mite
Nebraska	Kimball	7-21-66	Cattle	Tetranychidae - plant mite
	Otoe	12- 1-66	Sheep	Macrochelidae - free living mite
New Jersey	Mercer	9-13-66	Rabbit	*Cuterebra sp.* - rabbit bot
New York	Niagara	2-17-67	Sheep	Acaridae - grain mite
Oklahoma	Comanche	12- 5-66	Buffalo	*Hypoderma lineatum* - cattle grub
Pennsylvania	Mercer	1-20-67	Sheep	Tetranychidae - plant mite
Tennessee	Lawrence	9-28-66	Cattle	Acaridae - grain mite
Texas	Hidalgo	10- 4-66	Worm beds	Uropodidae - earthworm mite
	Juarez, Mex.	1-11-67	Cattle	Laelaptidae - rodent mite
	Cameron	1-14-67	Man	Trombidiidae - free living mite
	Jackson	6-19-67	Cattle	*Trombicula sp.* - chigger
Virginia	Carroll	2-15-67	Sheep	Oribatei - soil mite
	Surry	5- 7-67	Rabbit	Veigaiaidae mite
	Surry	5- 7-67	Rabbit	Acaridae - grain mite Cheyletidae mite Oribatei - soil mite
W. Virginia	Kanawha	1-10-67	Muskrat	Laelaptidae - rodent mite



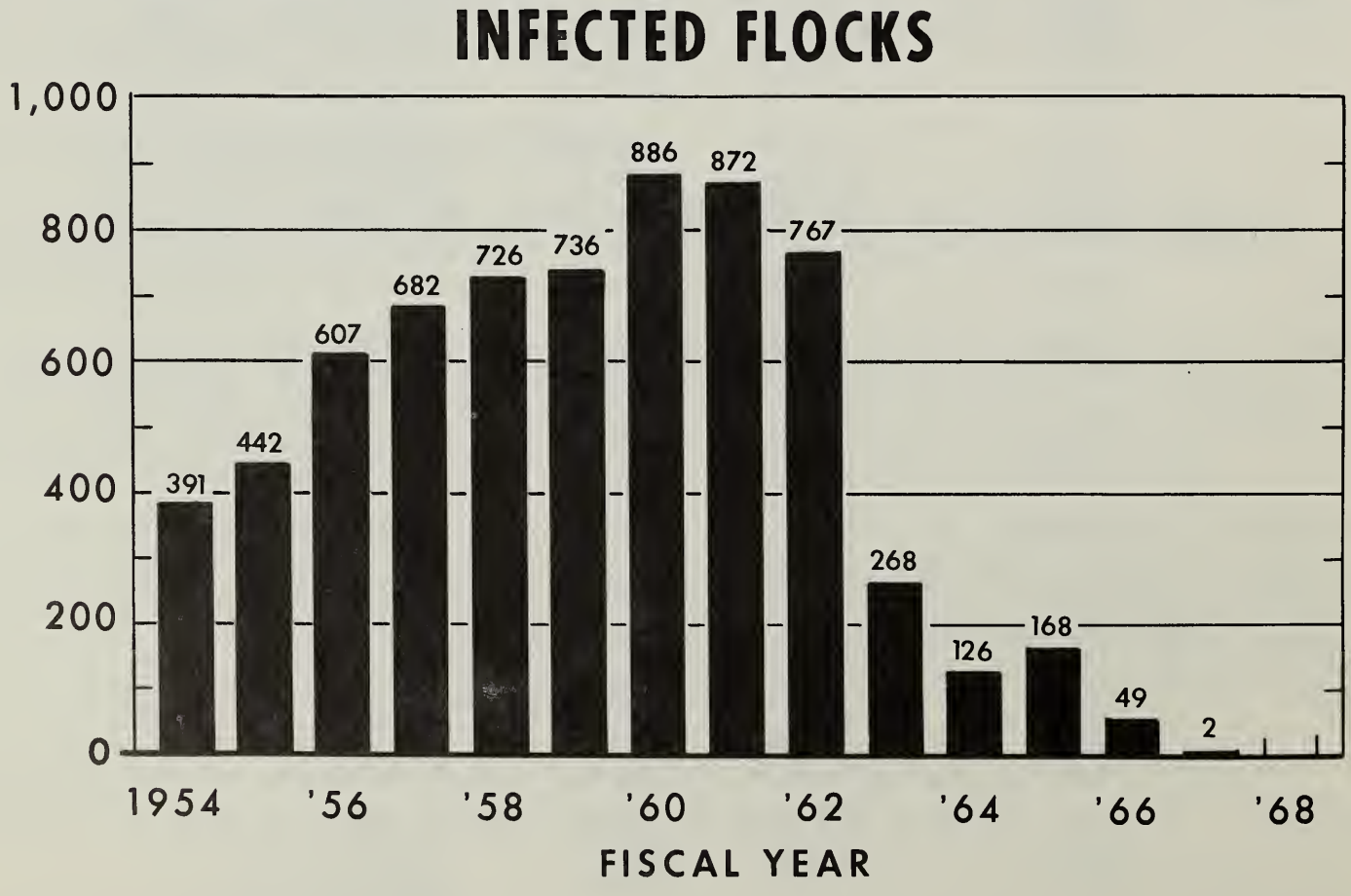
REPORTED OUTBREAKS OF
PSOROPTIC SHEEP SCABIES
FISCAL YEAR 1967

States and Counties Involved

Illinois - Lake County (1)
November 8, 1966

Minnesota - Fillmore County (1)
April 4, 1967

Psoroptic Sheep Scabies Reported

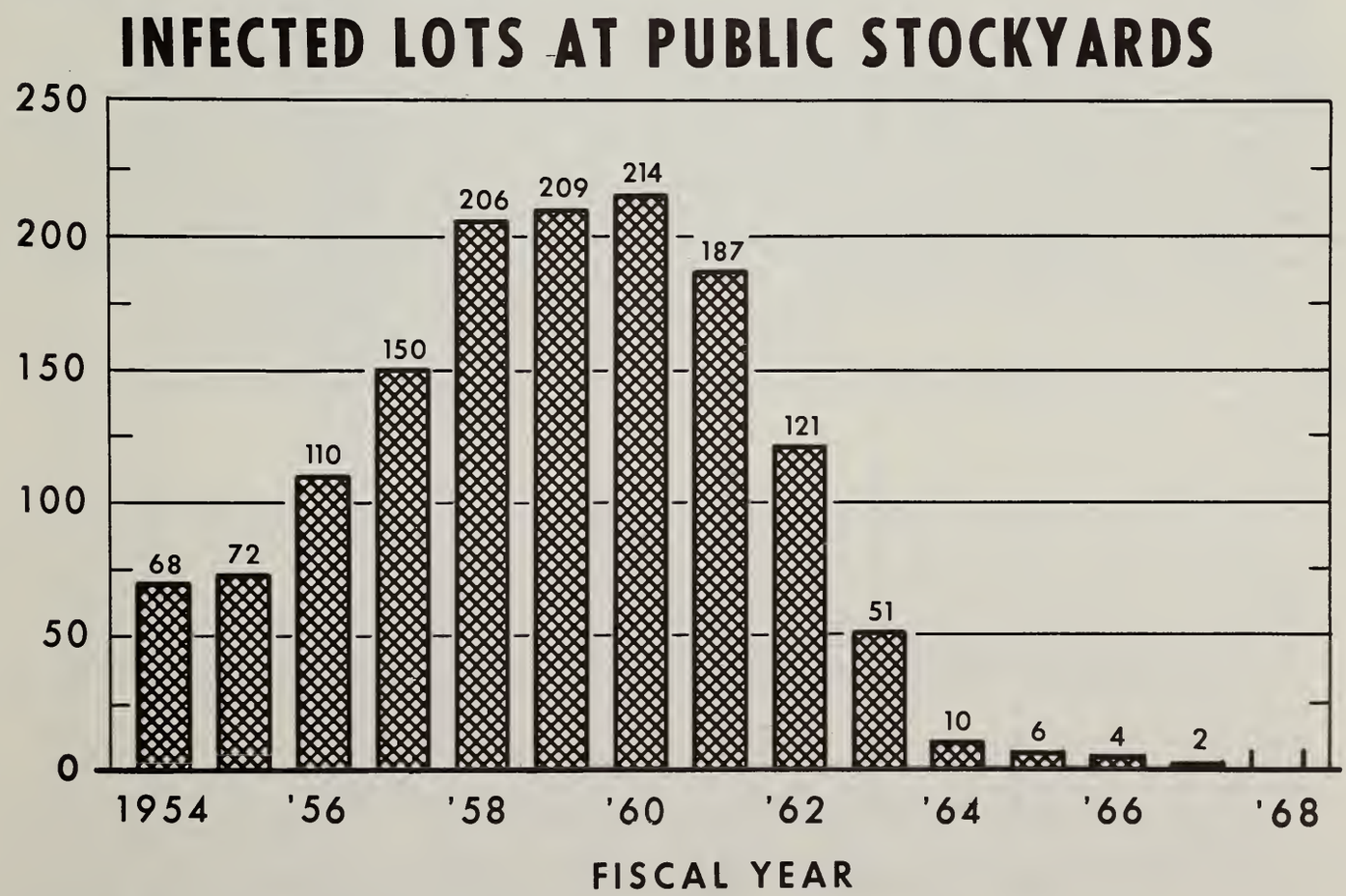


Alleged Interstate Violations and Results of Prosecutions Relating to 9 CFR, Part 74, Scabies in Sheep, Based on Reports Received in Washington, D. C., Disease Control Services Staff Office.

Cases successfully prosecuted*	1
Cases pending with Department of Justice and U. S. Attorneys	8
Cases closed by letters of warning with concurrence of Department of Justice	1
Cases declined for prosecution but letters of warning issued to the violators by U. S. Attorneys	0
Cases declined for prosecution by the U. S. Attorneys	0
Cases closed due to inadequate evidence or when further investigation disclosed that no violation had occurred	4
Cases under investigation	42

*A Scott County, Iowa, part-time sheep dealer pleaded guilty on January 31, 1967, and was fined $100 plus costs for the August 11, 1965, illegal movement of 47 sheep from a Scott County, Iowa, farm flock to a Mercer County, Illinois, auction market without the required inspection, treatment, and certification as per Part 74, 9 CFR.

Psoroptic Sheep Scabies



PSOROPTIC SHEEP SCABIES

State or Territory	Infected			Inspections		Dippings	
	Counties	Flocks	Sheep	Goats	Sheep	Goats	Sheep
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Alabama	--	--	--	--	9,778	--	1
Alaska	--	--	--	1	699	--	--
Arizona	--	--	--	67	78,557	--	--
Arkansas	--	--	--	--	7,375	--	--
California	--	--	--	3,780	707,555	802	599
Colorado	--	--	--	400	1,104,153	--	9,200
Connecticut	--	--	--	--	7,003	--	--
Delaware	--	--	--	--	3,199	--	--
Florida	--	--	--	--	4,011	--	--
Georgia	--	--	--	7,109	2,525	--	--
Hawaii	--	--	--	624	755	--	--
Idaho	--	--	--	--	1,909,832	--	--
Illinois	1	1	91	--	331,505	--	11,427
Indiana	--	--	--	--	198,738	--	--
Iowa	--	--	--	--	1,627,182	--	229
Kansas	--	--	--	--	98,373	--	411
Kentucky	--	--	--	--	126,156	--	497
Louisiana	--	--	--	--	51,458	--	1,625
Maine	--	--	--	--	5,092	--	--
Maryland	--	--	--	--	31,729	--	--
Massachusetts	--	--	--	--	6,156	--	--
Michigan	--	--	--	60	15,152	--	--
Minnesota	1	1	390	--	207,840	--	--
Mississippi	--	--	--	--	5,837	--	--
Missouri	--	--	--	--	211,768	--	--
Montana	--	--	--	--	13,088 1/	--	450
Nebraska	--	--	--	--	185,475	--	1,224
Nevada	--	--	--	--	191,815	--	--
New Hampshire	--	--	--	--	1,927	--	--
New Jersey	--	--	--	--	9,498	--	--
New Mexico	--	--	--	--	807,968	--	25,406
New York	--	--	--	--	74,686	--	--
North Carolina	--	--	--	--	17,091	--	--
North Dakota	--	--	--	--	62,887	--	--
Ohio	--	--	--	--	298,594	--	--
Oklahoma	--	--	--	85	28,653	--	368
Oregon	--	--	--	--	96,627	--	--
Pennsylvania	--	--	--	--	204,001	--	--
Rhode Island	--	--	--	46	1,904	--	--
South Carolina	--	--	--	--	1,731	--	--
South Dakota	--	--	--	--	355,703	--	6
Tennessee	--	--	--	--	3,471	--	--
Texas	--	--	--	560,884	2,712,100	2,203	34,940
Utah	--	--	--	128	241,443	--	752
Vermont	--	--	--	--	3,236	--	--
Virginia	--	--	--	--	122,430	--	1,224
Washington	--	--	--	--	111,809	--	--
West Virginia	--	--	--	222	183,371	--	18,758
Wisconsin	--	--	--	--	56,396	--	--
Wyoming	--	--	--	--	1,207,017	--	--
Puerto Rico	--	--	--	--	--	--	--
Virgin Islands	--	--	--	--	--	--	--
TOTALS:	2	2	481	573,406	13,745,349	3,005	107,117

1/ In addition 194,795 sheep were inspected by Montana Deputy State Veterinarians at auction markets.

General

During Fiscal Year 1967 increased efforts were made to locate any additional evidence of the disease. Approximately two million more cattle were inspected than the previous year. For the first time since 1963, psoroptic cattle scabies was not reported in the United States.

Release of Cattle Scabies Quarantined Areas in Texas and California

TEXAS

Cattle scabies was diagnosed in a shipment of 253 steers consigned for slaughter through the South Memphis Stockyards, Memphis, Tennessee, on December 8, 1965. These steers were from a Hale County, Texas, feedlot. Inspections of the feedlot in Texas where the steers originated resulted in finding additional psoroptic cattle scabies. Further inspections of cattle in other feedlots in the area revealed psoroptic scabies infection in six additional feedlots. Many sales of feeder cattle had been made into these feedlots from nearby counties. Due to the finding of scabies infection in five counties and movement of cattle into these counties from three adjoining counties, eight counties were placed under Federal Quarantine in March 1966.

All Texas-infected herds were dipped twice in a permitted dip at 10- to 14-day intervals under supervision of regulatory officials. Cattle in exposed herds were dipped once. All cattle in the eight-county quarantine area received inspections during the winter of 1965-66 and 1966-67 without finding additional infection. Cattle in 30 counties surrounding the quarantined area in the Pan Handle Area of Texas were given one inspection during the winter of 1966-67 without finding additional psoroptic scabies. The eight-county quarantined area was released from quarantine on May 24, 1967.

CALIFORNIA

In February 1966 psoroptic cattle scabies was diagnosed in a cow-calf herd in Merced County, California. A practicing veterinarian noticed a suspicious skin condition in the cattle and reported this to a veterinarian with the California Bureau of Animal Health. During the tracing of additions to and sales from this herd, three other herds were found to be infected with psoroptic scabies. A Federal Quarantine was placed on Merced County in March 1966.

All cattle in the infected herds were dipped twice at 10- to 14-day intervals in a permitted dip under the supervision of regulatory officials. All exposed animals were dipped also. Two complete inspections of all cattle in Merced County were made between February 1966 and March 1967 without finding additional psoroptic scabies. Merced County was released from Federal Quarantine on May 24, 1967.

PSOROPTIC CATTLE SCABIES

PROGRAM ACTIVITIES FISCAL YEARS 1954 THROUGH 1967

Fiscal Year	Infected			Other Than Public Stockyards		At Public Stockyards		
	States	Counties	Herds 1/	Inspections	Dippings	Infected Lots	Inspections	Dippings
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
1954	6	15	28	1,090,260	32,844	--	25,810,912	13,019
1955	6	19	30	1,146,174	396,268	2	25,845,757	12,389
1956	5	5	7	1,763,243	52,003	1	25,187,037	672
1957	5	12	25	2,089,912	184,236	3	25,994,640	2,287
1958	3	4	4	2,139,102	117,768	--	23,817,304	609
1959	6	21	27	5,862,011	268,364	9	21,977,606	21,456
1960	4	4	4	6,927,266	374,990	--	21,700,786	53,627
1961	5	8	10	7,660,685	234,293	3	21,334,686	46,005
1962	3	4	4	8,160.029	123,549	1	20,438,908	42,197
1963	--	--	--	13,464,758	129,882	--	20,168,561	69,772
1964	2	2	2	17,260,340	40,827	1	19,912,734	43,333
1965	4	4	4	18,389,099	77,027	--	20,508,076	50,132
1966	3	9	15	22,509,512	247,960	1	20,048,390	52,501
1967	--	--	--	24,361,958	105,820	--	18,491,304	49,185

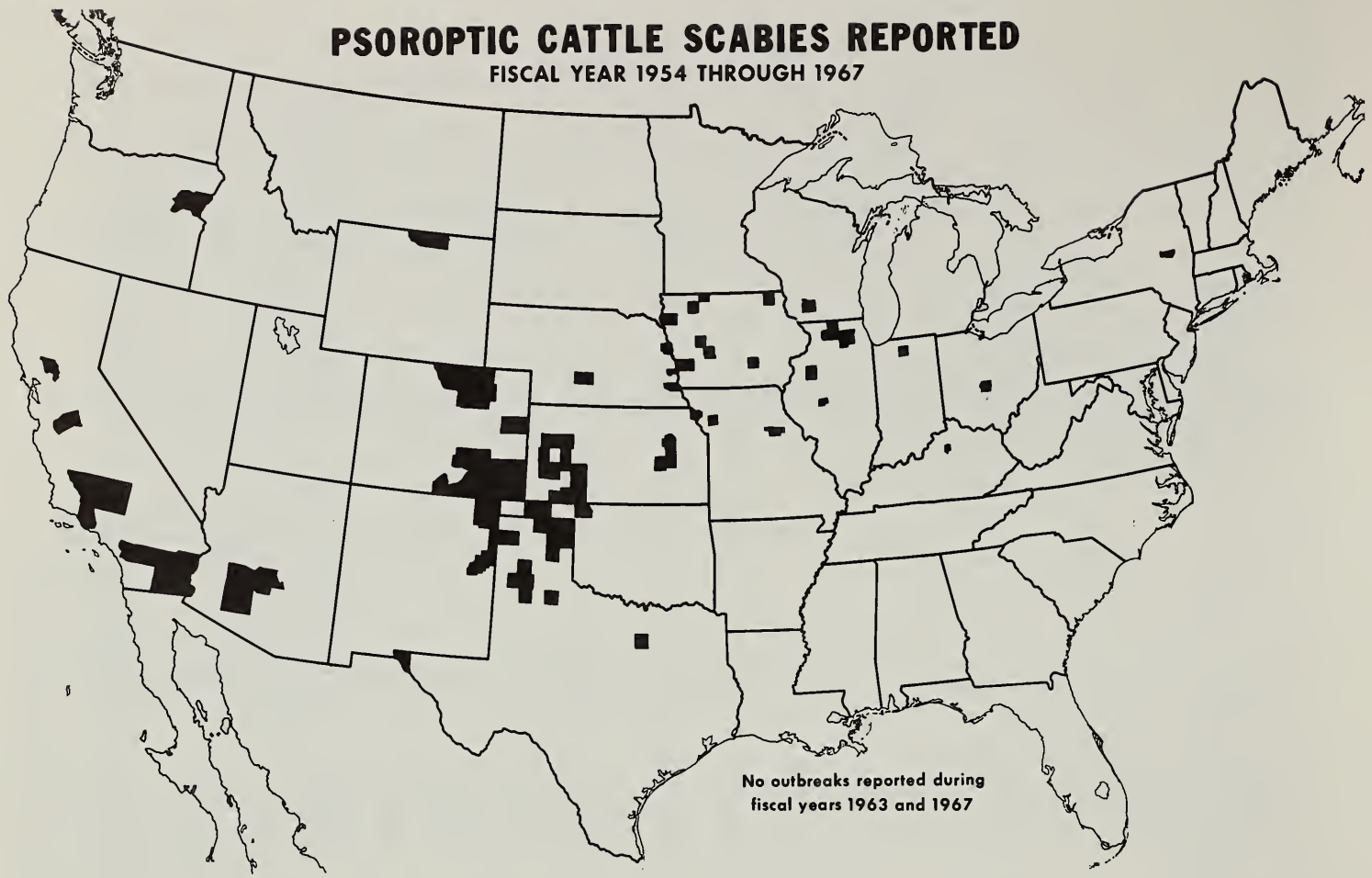
1/ Includes infected lots located at public stockyards.

PSOROPTIC CATTLE SCABIES

State or Territory	Infected			Inspections	Dippings
	Counties	Herds	Cattle	Cattle	Cattle
	Number	*Number*	*Number*	*Number*	*Number*
Alabama	--	--	--	145,275	692
Alaska	--	--	--	1,204	--
Arizona	--	--	--	1,524,958	6,703
Arkansas	--	--	--	514	520
California	--	--	--	4,430,792	11,482
Colorado	--	--	--	2,257,696	15,279
Connecticut	--	--	--	869	--
Delaware	--	--	--	--	--
Florida	--	--	--	756,876	--
Georgia	--	--	--	960,995	298
Hawaii	--	--	--	20,655	--
Idaho	--	--	--	267,343	--
Illinois	--	--	--	1,039	1,240
Indiana	--	--	--	112	--
Iowa	--	--	--	881	1,254
Kansas	--	--	--	1,304,057	3,051
Kentucky	--	--	--	37	--
Louisiana	--	--	--	373	--
Maine	--	--	--	--	--
Maryland	--	--	--	--	--
Massachusetts	--	--	--	--	--
Michigan	--	--	--	1	--
Minnesota	--	--	--	--	--
Mississippi	--	--	--	756	--
Missouri	--	--	--	706	2,185
Montana	--	--	--	59,270	--
Nebraska	--	--	--	19,758	144
Nevada	--	--	--	112,634	--
New Hampshire	--	--	--	--	--
New Jersey	--	--	--	--	--
New Mexico	--	--	--	130,827	--
New York	--	--	--	27	--
North Carolina	--	--	--	--	--
North Dakota	--	--	--	--	--
Ohio	--	--	--	61,915	--
Oklahoma	--	--	--	557,290	835
Oregon	--	--	--	30,184	--
Pennsylvania	--	--	--	--	--
Rhode Island	--	--	--	1,106	--
South Carolina	--	--	--	--	--
South Dakota	--	--	--	23,938	215
Tennessee	--	--	--	106,155	10,467
Texas	--	--	--	9,718,004	45,324
Utah	--	--	--	677,900	29
Vermont	--	--	--	864	857
Virginia	--	--	--	--	--
Washington	--	--	--	568,954	2,463
West Virginia	--	--	--	--	50
Wisconsin	--	--	--	92,991	--
Wyoming	--	--	--	525,182	2,732
Puerto Rico	--	--	--	--	--
Virgin Islands	--	--	--	--	--
TOTALS:	--	--	--	24,361,958	105,820

PSOROPTIC CATTLE SCABIES REPORTED

FISCAL YEAR 1954 THROUGH 1967



PSOROPTIC CATTLE SCABIES REPORTED

PSOROPTIC CATTLE SCABIES - FISCAL YEAR 1954 TO 1967

Fiscal Year and State	County	Outbreaks
		Number
Fiscal Year 1954		
Arizona	Maricopa	8
California	Imperial	2
	Riverside	1
Colorado	Baca	1
	Bent	4
	Crowley	1
	Kit Carson	1
	Otero	1
	Prowers	3
	Pueblo	2
Missouri	Audrain	1
Oklahoma	Harper	1
Texas	El Paso	1
	Hartley	1
Total		28
Fiscal Year 1955		
Colorado	Costilla	1
	Crowley	9
	Larimer	1
	Otero	1
	Prowers	3
Kansas	Doniphan	1
	Finney	1
	Ford	1
	Hodgeman	1
	Logan	1
	Lane	1
	Thomas	2
Kentucky	Franklin	1
Nebraska	Burt	1
Texas	Lipscomb	2
	Swisher	2
	Tarrant	2
Total		31
Fiscal Year 1956		
Colorado	Crowley	3
Iowa	Mahaska	1
Kansas	Finney	1
New Mexico	Union	1
Texas	Roberts and Gray	1
Total		7
Fiscal Year 1957		
Colorado	Bent	2
	Crowley	11
	Las Animas	3
	Otero	1
	Prowers	1
	Pueblo	1
Illinois	Kane	1
Iowa	Guthrie	1
Kansas	Lyon	1
Missouri	Clinton	1
Ohio	Franklin	1
Wyoming	Sheridan	1
Total		25
Fiscal Year 1958		
Colorado	Bent	1
	Prowers	1
Iowa	Carroll	1
Kansas	Seward	1
Total		4
Fiscal Year 1959		
Colorado	Otero	1
Illinois	DeKalb	2
	DuPage	1
	Knox	1
	Ogle	1
Fiscal Year 1959 Con't		
Iowa	Clay	1
	Emmett	1
	Pottawattamie	2
Kansas	Chase	1
	Clark	1
	Ford	1
	Gove	5
	Kearney	1
	Lane	1
	Meade	1
	Wichita	1
Nebraska	Dawson	1
	Otoe	1
	Sarpy	1
Texas	Hemphill	1
	Ochiltree	1
Total		27
Fiscal Year 1960		
Colorado	Weld	1
Indiana	Marshall	1
Iowa	Pottawattamie	1
Oregon	Baker	1
Total		4
Fiscal Year 1961		
Colorado	Adams	1
	Morgan	1
	Weld	2
Illinois	Menard	1
	Winnebago	1
Iowa	Plymouth	1
Oklahoma	Texas	2
Texas	Swisher	1
Total		10
Fiscal Year 1962		
New Mexico	Quay	1
Texas	Hansford	1
	Ochiltree	1
Wisconsin	Iowa	1
Total		4
Fiscal Year 1963		
No Outbreaks Reported		
Fiscal Year 1964		
Colorado	Douglas	1
Texas	Castro	1
Total		2
Fiscal Year 1965		
California	Kern	1
Kansas	Wabaunsee	1
New York	Montgomery	1
Texas	Castro	1
Total		4
Fiscal Year 1966		
California	Kern	1
	Merced	4
	Ventura	1
	Yolo	1
Iowa	Winneshiek	1
Texas	Castro	3
	Hale	2
	Motley	1
	Randall	1
Total		15
Fiscal Year 1967		
No Outbreaks Reported		